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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/992,914	12/18/1997	ELIRO WATANABE	0020-4348P	4405

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EXAMINER

KRUSE, DAVID H

ART UNIT	PAPER NUMBER
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1638

DATE MAILED: 02/06/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

08/992,914

Applicant(s)

WATANABE ET AL.

Examiner

David H Kruse

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4, 6, 7, 9-18, 30-36, 40, 41, 43 and 44 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6, 7, 9-18, 30-36, 40, 41, 43 and 44 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 23. 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Information Disclosure Statement***

1. The information disclosure statement filed 5 March 2001 has been considered.

***Status of the Application***

2. Claims 1-4, 6, 7, 9-18, 30-36, 40, 41, 43 and 44 are pending.
3. Claims 1-4, 6-7, 9-18, 30-36, 40 and 41 had been allowed as free of the prior art in the Office Action mailed 9 June 1999 (Paper #13).
4. New claims 43 and 44 had been entered as requested in the Amendment filed 30 July 1999 (Paper #14).
5. Claims 1-4, 6-7, 9-18, 31-36, 40-41 and 43-44 stand provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-11 and 16-22 of copending Application No. 09/301,766 in the Office Action mailed 14 October 1999 (Paper #17). No response by Applicant appears in the file.
6. The Supplemental Amendment filed 16 January 2002 has been entered into the file. The Examiner would like to thank Applicant's representative for help in clarifying the status of the instant Application.
7. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

***Claim Objections***

8. Claim 1 is objected to because of the following informalities: At line 3, the phrase "capable of producing" is vague and does not state that anything is actually produced. It is suggested that the term -- produces -- be used in place of the phrase.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

9. Claims 10, 14, 30, 32 and 36 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The phrase "the raffinose synthase gene" lacks a proper antecedent basis with the claim to which it depends.

10. Claims 1-4, 7, 10, 11, 14-16, 30-36, 40 and 41 are rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Applicant describes isolated nucleic acids SEQ ID NO: 1 encoding a *Vicia faba* raffinose synthase enzyme, SEQ ID NO: 3 encoding a *Glycine max* raffinose synthase enzyme, SEQ ID NO: 5 encoding a *Stachys sieboldii* raffinose synthase enzyme and SEQ ID NO: 7 encoding a *Zea mays* raffinose synthase enzyme, plants transformed therewith (see the Watanabe Declaration filed 4 March 1999) and methods of using said isolated nucleic acids.

Applicant broadly claims any nucleic acid isolated from any plant comprising a nucleotide sequence coding for a raffinose synthase enzyme activity, a chimeric gene comprising said nucleic acid and transformants comprising said chimeric gene.

Applicant does not describe other isolated nucleic acids encoding a raffinose synthase enzyme activity other than those shown in SEQ ID Nos. 1, 3, 5 and 7 in the instant Specification.

Hence, it is unclear from the instant specification that Applicant was in possession of the invention as broadly claimed. See *University of California V. Eli Lilly and Co.*, 43 USPQ2d 1398 (Fed. Cir. 1997), which teaches that the disclosure of a process for obtaining cDNA from a particular organism and the description of the encoded protein fail to provide an adequate written description of the actual cDNA from that organism which would encode the protein from that organism, despite the disclosure of a cDNA encoding that protein from another organism.

***Claim Rejections - 35 USC § 102***

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. § 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily

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published under 35 U.S.C. § 122(b). Therefore, this application is examined under 35 U.S.C. § 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. § 102(e)).

12. Claims 1-4, 7, 10, 11, 14-16, 30-36, 40 and 41 are rejected under 35 U.S.C. § 102(e) as being anticipated by Osumi *et al* (U.S. Patent 6,166,292), filed April 1997.

Osumi discloses a nucleic acid isolated from a dicot, cucumber, that encodes a raffinose synthase enzyme (see claim 1) and an isolated DNA which originates from an organism having an ability to produce raffinose from sucrose and galactinol which is hybridizable under "a stringent condition" with said nucleic acid (see claim 2(b)). The isolated nucleic acids of Applicant's claims 3, 4, 7, 10, 11 and 14-16 would inherently be hybridizable under a stringent condition to the coding region of Osumi's SEQ ID NO:4. Osumi discloses a chimeric gene, plasmid, transformed microorganism and transformed plant comprising said isolated nucleic acid (see columns 22-24). Osumi also discloses a method for metabolic modification comprising introducing said isolated nucleic acid into a host organism (see Table 4 at column 24). Hence, Osumi has previously disclosed all of the claim limitations.

#### ***Double Patenting***

13. Claims 1-4, 6-7, 9-18, 31-36, 40-41 and 43-44 remain provisionally rejected and claim 30 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-11 and 16-22 of copending Application No. 09/301,766. This rejection is repeated for the reason of record as set forth in the last Office action mailed 14 October 1999. Applicant has place no arguments traversing this rejection on the record.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

14. Claims 1-4, 6-7, 9-18, 30-36, 40-41 and 43-44 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 40-49 and 58 of copending Application No. 09/415,918. Although the conflicting claims are not identical, they are not patentably distinct from each other because both applications are directed to the same subject matter, in particular SEQ ID Nos. 1, 3, 5 and 7 and nucleic acids that encodes the amino acid sequences set forth in SEQ ID Nos. 2, 4, 6 and 8, and fragments thereof.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

15. Claims 1-4, 7, 10, 11, 14-16, 30-36 and 40-41 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 5-7 and 14-17 of copending Application No. 09/612,095. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of the copending application encompasses isolated natural mutations of genes encoding plant raffinose synthase, which would be encompassed by the instant claims.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

**Conclusion**

16. This action is Non-Final.
17. No claims are allowed.
18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David H. Kruse, Ph.D. whose telephone number is (703) 306-4539. The examiner can normally be reached on Monday to Friday from 8:00 a.m. to 4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Amy Nelson can be reached at (703) 306-3218. The fax telephone number for this Group is (703) 872-9306 Before Final or (703) 872-9307 After Final.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to Kim Davis whose telephone number is (703) 305-3015.

David H. Kruse, Ph.D.  
30 January 2002

DAVID T. FOX  
PRIMARY EXAMINER  
GROUP 1638

